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PATENT

Date October 19, 2000

Docket No. 16764-5722

CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this New Application Transmittal and the documents referred to as enclosed therein are being deposited with the United States Postal Service on October 19, 2000 in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number EL389222790US addressed to: Box Patent Application, Assistant Commissioner of Patents, Washington, D.C. 20231.

Alan H. Norman

(Type name of person mailing paper)

(Signature of person mailing paper)

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Box Patent Application  
Assistant Commissioner of Patents  
Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Christopher M. Pohrer

For : HEIGHT-ADJUSTABLE VOLLEYBALL NET AND STANDARD SYSTEM AND METHOD

Enclosed are:

1. Benefit of Prior U.S. Application (35 USC 120)

The new application being transmitted claims the benefit of a prior U.S. application and enclosed is added page for new application transmittal where benefit of a prior U.S. application claimed.

2. The Papers Required For Filing Under 37 CFR 1.53:

11 Pages of Specification  
1 Pages of Abstract  
9 Pages of Claims  
2 Sheets of Drawing

     formal   X   informal

In addition to the above papers there is also attached:

     Pages of an Amendment  
  X   Return Receipt Postcard  
     Information Disclosure Statement with      copies of references.

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**3. Declaration or oath**

☒ Enclosed 3 pages  
☒ Newly executed (original or copy)  
☐ Copy from a prior application (continuation/divisional with page 5 of 5 completed)  
☐ Deletion of Inventor(s) (signed statement attached deleting inventor(s) of prior application)  
☐ Not enclosed

**4. Inventorship Statement**

The inventorship for all the claims in this application are:

☒ the same

OR

☐ are not the same and an explanation, including the ownership of the various claims at the time the last claimed invention was made, is submitted.

**5. Language**

☒ English ☐ Non-English

A verified English translation of the

[check applicable item(s)]

☐ specification and claims

☐ declaration

is attached.

**6. Assignment**

☒ An assignment of the invention to AALCO Manufacturing Company

☒ is filed under separate cover sheet

☐ was filed in the prior application

☐ will follow

**7. Certified Copy**

(Country) \_\_\_\_\_ (Application No.) \_\_\_\_\_ (Filed) \_\_\_\_\_

from which priority is claimed

☐ is attached

☐ will follow

## 8. Fee Calculation

### CLAIMS AS FILED

	Number Filed	Provided with Basic Fee	Number Extra	Rate	Basic Fee \$710
Total Claims	18	20	0	X \$18.00	\$ .00
Independent Claims	3	3	0	X \$80.00	\$ .00
Multiple Dependent Claim(s), if any	0	0	0	X \$270.00	\$ .00

☐ Amendment canceling extra claims enclosed

☐ Amendment deleting multiple dependencies enclosed

☐ Fee for extra claims is not being paid at this time

Filing Fee Calculation

\$ 710.00

## 9. Small Entity Statement

☐ verified statement that this is a filing by a small entity under 37 CFR 1.9 and 1.27 is attached.

Filing Fee Calculation (50% of above)

\$ \_\_\_\_\_

## 10. Fee Payment Being Made At This Time

☒ Enclosed

☒ basic filing fee

\$ 710.00

Total fees enclosed

\$ 710.00

## 11. Method of Payment of Fees

☒ check in the amount of \$ 710.00

**12. Authorization to Charge Additional Fees**

X The Commissioner is hereby authorized to charge the following additional fees which may be required to Account No. 18-1829;

X 37 CFR 1.16 (filing fees and presentation of extra claims)

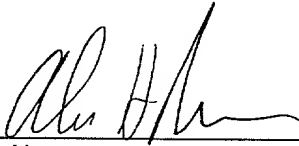
X 37 CFR 1.17 (application processing fees)

37 CFR 1.311(b).      37 CFR 1.18 (issue fee at or before Mailing of Notice of Allowance, pursuant to

**13. Instructions As To Overpayment**

X credit Account No. 18-1829

**14. Correspondence Address**



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**PATENT**

**HEIGHT-ADJUSTABLE VOLLEYBALL NET  
AND STANDARD SYSTEM AND METHOD**

**Background Of The Invention**

This invention relates to height adjustable nets for use in games such as volleyball.

Volleyball regulations have specific requirements for the volleyball court and equipment. A volleyball net is required to be 3 feet (1 meter) wide and at least 32 feet (9.5 meters) in length. The upper edge margin of the net comprises an elongate sleeve through which a net-supporting cable extends. Typically, the net is attached to upright standards via the net-supporting cable. Preferably, the standards are 3 feet (1 meter) outside a volleyball court's sidelines. The width of the court (i.e., the distance between the sidelines) is 9 meters. The height of the net is measured at the center of the net and is required to be 7 feet, 11 5/8 inches (2.43 meters) for men and 7 feet, 4 1/8 inches (2.24 meters) for women. The net height measured at the ends of the net is not permitted to exceed the center height by more than 3/4 inch (2 millimeters). In other words, the net cannot sag by more than 3/4 inch (2

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millimeters) at its center. To prevent excessive sag, the net-supporting cable must be maintained at a sufficient tension.

Because the net's height requirements are different for men's volleyball and women's volleyball and because men's and women's volleyball are  
5 played on the same courts but at different times, it is often necessary to change the net's height. In prior art net/standard systems, the net height is varied by first relieving the tension on the net-supporting cable and then lowering the standard. After the net is positioned at its new height, the net-supporting cable is re-tensioned to prevent excessive sag. Changing the net  
10 height in this manner is time consuming. Also, it is difficult when changing the height to obtain the precise required height. This is because the net's height increases slightly upon tensioning of the net-supporting cable. Unless the increase caused by the tensioning is taken into account before the cable is tensioned, it will be necessary to again relieve the tension of the cable, lower  
15 the net to the proper height, and then re-tension the cable.

### **Summary Of The Invention**

Among the features and advantages of the present invention may be noted the provision of an improved method of changing the height of a  
20 volleyball net; the provision of such a method in which the net height may be adjusted quickly and easily; the provision of such a method in which the net height may be varied without relieving tension on the net-supporting cable; and the provision of an improved height-adjustable net and standard system.

Generally, a method of the present invention for adjusting the height of a volleyball net comprises securing first and second net standards to a support surface, such as a floor, in a manner so that the net standards extend up from the support surface in a generally upright position. Each net standard

5 comprises a lower post section and an upper post section slidably connected to the lower post section for telescoping movement of the upper post section relative to the lower post section along a post axis between a raised position and a lowered position. A net and cable assembly is provided. The net and cable assembly comprises a net and a net-supporting cable. The net has an

10 upper edge margin and a cable-receiving sleeve at its upper edge margin. The upper edge margin has first and second ends and a mid-point midway between the first and second ends. The net-supporting cable extends through the cable-receiving sleeve of the net. The method further comprises

15 operatively connecting the net-supporting cable to the upper post sections of the first and second net standards in a manner so that the net is between the first and second net standards and extends downward from the net-supporting cable, tensioning the net-supporting cable to a net-supporting tension which is sufficiently great that the elevation of the first and second ends of the net's

20 upper edge margin does not exceed the elevation of the mid-point of the net's upper edge margin by more than approximately 3/4" (2 cm) when the first and second ends of the net's upper edge margin are at approximately the same elevation, and moving the upper post sections of the first and second net standards between their raised and lowered positions without reducing the tension of the cable below the net-supporting tension.

Another aspect of the present invention is a height-adjustable net and standard system for use in ball games such as volleyball. The net and standard system comprises first and second net standards, a net, a net-supporting cable, and at least one tension adjusting mechanism. The net standards are adapted for being secured to a support surface, such as a floor, in a generally upright orientation so that the first and second net standards are horizontally spaced from one another. The net has an upper edge margin, a lower edge margin, and side margins. The net has a cable-receiving sleeve at its upper edge margin. The net is adapted to be supported by and extend between the first and second net standards. The net-supporting cable is adapted for extending through the cable-receiving sleeve of the net and for supporting the net between the net standards. Each of the first and second net standards comprises a lower post section, an upper post section and a drive mechanism. The upper post section is slidably connected to the lower post section for telescoping movement of the upper post section relative to the lower post section along a post axis between a raised position and a lowered position. The drive mechanism is operatively connected to the upper and lower post sections. The drive mechanism is operable in a manner to axially move the upper post section relative to the lower post section between its raised and lowered positions. The tension adjusting mechanism is attached to the upper post section of the first net standard and is adapted to tension the net-supporting cable in a taut configuration between the first and second net standards. The drive mechanism is adapted to move the corresponding



upper post section between its raised and lowered positions even when the cable is tensioned by the tension adjusting mechanism.

Other objects and features will be in part apparent and in part pointed out hereinafter.

5

### **Brief Description Of The Drawings**

Fig. 1 is a front elevational view of a net and standard system of the present invention, the net and standard system having a net and first and second standards for supporting the net;

10 Fig. 2 is a longitudinal cross-sectional view of the first standard of the net and standard system of Fig. 1; and

Fig. 3 is a cross-sectional view taken along the plane of line 3-3 of Fig. 2.

Corresponding reference characters indicate corresponding parts  
15 throughout the several views of the drawings.

### **Description Of The Preferred Embodiment**

A volleyball net and standard system of the present invention is indicated generally in Fig. 1 by reference numeral 20. The net and standard system 20 comprises a volleyball net, generally indicated at 22, and first and second net standards, generally indicated at 24, 26, respectively. The net 22 is releasably attached to the standards 24, 26 via a net-supporting cable 28. The net 22 has an upper edge margin 30, a lower edge margin 32, and side

margins 34. The upper edge margin 30 of the net 22 constitutes an elongate cable-receiving sleeve 36 extending, preferably extending the entire length of the net. The net-supporting cable 28 extends through the cable-receiving sleeve 36 of the net 22 and, as discussed in greater detail below, is

- 5 operatively connected to the net standards 24, 26 in a manner so that the cable is in tension with the net depending from the cable.

Referring to Figs. 2 and 3, each of the first and second net standards 24, 26 comprises a lower post section, generally indicated at 40, an upper post section, generally indicated at 42, and a drive mechanism, generally indicated at 44. The lower post section 40 is preferably an extruded aluminum tube. The lower post section 40 is preferably releasably attached to a support surface, such as a floor F, via a conventional post-receiving sleeve 48 (Fig. 2) embedded into the support surface. The lower post section 40 and sleeve 48 mate with one another in a manner so that the lower post section is in a generally upright orientation relative to the support surface.

The upper post section 42 comprises an outer slider tube 50 and an inner tube 52. The outer slider tube 50 is dimensioned for a sliding fit over the lower post section 40. The inner tube 52 has an outer diameter less than the inner diameter of the lower post section 40 and is adapted to extend down into the upper end of the lower post section. The outer slider tube 50 surrounds the inner tube 52 and is secured at its upper end to the inner tube. The inner slider tube 52 protrudes at its upper end from the outer slider tube 50. A pulley 54 is rotatably attached to the upper end of the inner tube 52. The upper post section 42 is adapted for telescoping movement relative to the

lower post section 40 along a post axis X between a raised position and a lowered position. The net-supporting cable 28 is shown in both solid and in phantom in Fig. 2. The solid net-supporting cable 28 represents the height of the cable when the upper post section 42 is in its raised position. The phantom net-supporting cable 28 represents the height of the cable when the upper post section 42 is in its lowered position.

The upper post section 42 is moved between its raised and lowered positions via the drive mechanism 44. Preferably, the drive mechanism 44 is a screw-type drive mechanism having an elongate screw 60, a threaded adjuster member 62, a gear train, generally indicated at 64, and a crank 66. The elongate screw 60 extends along the post axis X and is journaled at its lower end to a suitable bearing block 68 for rotation of the screw about the post axis. The bearing block 68 is fixed to the inside of the lower post section 40 and prevents the screw 60 from moving axially relative to the lower post section. The threaded adjuster member 62 is fixed to the lower end of the upper post section's inner tube 52 and threadably engages the screw 60 so that rotation of the screw about the post axis X in one direction raises the upper post section and rotation of the screw in an opposite direction lowers the upper post section. The gear train 64 comprises a drive gear 70 and a driven gear 72. The drive gear 70 is preferably a bevel gear keyed to a drive shaft 74. The drive shaft 74 is preferably journaled to the lower post section 40 for rotation of the drive shaft 74 and drive gear 70 about a drive axis D. The drive shaft 74 and drive gear 70 are preferably rotated about the drive axis via the crank 66. The driven gear 72 is preferably a bevel gear keyed to

the lower end of the screw 60 for rotation with the screw and engages the drive gear 70 in a manner to be turned by rotation of the drive gear. Thus, turning the crank 68 about the drive axis D rotates the drive gear 70, and rotation of the drive gear rotates the driven gear 72 and screw 60 about the post axis X to raise or lower the upper post section 42 relative to the lower post section.

Preferably, a tensioning mechanism 76 is secured to the upper post section 42 of the first net standard 24 for tensioning the net-supporting cable 28. A first end of the net-supporting cable 28 is operatively connected to the upper post section 42 of the first net standard 24 via the tensioning mechanism 76. A second end of the net-supporting cable 28 is connected to the upper post section 42 of the second net standard 26 either directly or via a strap connected to such upper post section. Preferably, the tensioning mechanism 76 comprises a winch mechanism having a winch 78 and a tensioning strap 80. The winch 78 is adapted for increasing or decreasing the effective length of the tensioning strap 80 (i.e., the distance between the winch 78 and the tensioning strap/cable connection). Operating the winch 78 to decrease the effective length of the tensioning strap 80 increases tension of the net-supporting cable 28. Operating the winch 78 to increase the effective length of the tensioning strap 80 decreases tension of the net-supporting cable 28. Although the tensioning mechanism 76 is preferably a winch mechanism, it is to be understood that any other suitable tensioning mechanism may be employed without departing from the scope of this invention. For example, the tensioning mechanism may comprise a

mechanism which laterally deflects an intermediate portion of a strap to tension the strap or a mechanism which moves the strap in a longitudinal direction to change the tension of the cable.

Preferably, a lower cable 84 (Fig. 1) extends through a sleeve at the lower edge margin 32 of the net. The lower cable 84 is preferable connected to the upper post sections 42 via suitable hand-adjustable straps. The side margins 34 of the net 22 are preferably also connected to the upper post sections 42 via hand-adjustable straps. The hand-adjustable straps are adapted to be hand-tensioned to provide the desired tension in the net 22.

In operation, the first and second net standards 24, 26 are inserted into the post-receiving sleeves 48 on opposite sides of a volleyball court. The sleeves 48 are preferably spaced apart a distance of at least 32 feet. More preferably, the sleeves 48 are spaced apart a distance of 36 feet with each sleeve being 3 feet from the sideline of the court so that the standards 24, 26 are 3 feet from the sideline of the court. When properly positioned in the sleeves 48, the standards 24, 26 extend up from the floor F in a generally upright manner, preferably so that each post axis X is vertically oriented. With the net-supporting cable 38 extending through the cable-receiving sleeve 36 of the net 22, the first end of the cable is releasably attached to the tensioning strap 80 of the winch mechanism and the second end of the cable is releasably attached to the upper post section 42 of the second net standard 26 via a strap 88. The net-supporting cable 38 is positioned so that the cable is between the two pulleys 54 of the upper post sections 42. The net's upper edge margin 30 has first and second ends 90, 92 (Fig. 1) and a mid-point 94

midway between the first and second ends. With the two pulleys 54 preferably at the same elevation, the winch 78 is operated in a manner to tension the net-supporting cable 38 to a net-supporting tension which is sufficiently great so that the first and second ends 90, 92 of the net's upper edge margin 30 does not exceed the elevation of the mid-point of the net's upper edge margin by more than approximately 3/4" (2 cm) when the first and second ends of the net's upper edge margin are at approximately the same elevation. Preferably, the distance between the two ends 90, 92 is at least 29.5 feet, and is more preferably 30 feet. The net-supporting cable 38 is preferably tensioned to this extent to meet the tension requirements of the volleyball regulations. After tensioning of the net-supporting cable 38, the lower cable 84 and the side margins 34 of the net 22 are tensioned by hand-tensioning the hand-adjustable straps. Thus, the net may be tensioned in this manner to satisfy the net requirements of the volleyball regulations. With the net so tensioned, the drive mechanisms 44 of the first and second standards 24, 26 are operated to move the net 22 to the desired height. For example, if the net is to be used for men's volleyball, the drive mechanisms 44 are operated to move the tensioned net to a height of 7 feet, 11 5/8 inches above the floor F as measured from the midpoint 94. If the net is to be used for women's volleyball, the drive mechanisms 44 are operated to move the tensioned net to a height of 7 feet, 4 1/8 inches above the floor F as measured from the midpoint 94. If the net is to be used for children to play volleyball, the drive mechanisms 44 may be operated to move the tensioned net to even a lower height. Preferably, the net's height may be adjusted in

this manner between heights of 6 feet to 8 feet. Thus, the net's height may be lowered or raised without reducing the tension of the cable below the net-supporting tension.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above construction and method without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A method of adjusting the height of a volleyball net comprising:

securing first and second net standards to a support surface, such as a floor, in a manner so that the net standards extend up from the support surface in a generally upright position, each net standard comprising a lower post section and an upper post section slidably connected to the lower post section for telescoping movement of the upper post section relative to the lower post section along a post axis between a raised position and a lowered position;

providing a net and cable assembly comprising a net and a net-supporting cable, the net having an upper edge margin and a cable-receiving sleeve at its upper edge margin, the upper edge margin having first and second ends and a mid-point midway between the first and second ends, the net-supporting cable extending through the cable-receiving sleeve of the net;

operatively connecting the net-supporting cable to the upper post sections of the first and second net standards in a manner so that the net is between the first and second net standards and extends downward from the net-supporting cable;

tensioning the net-supporting cable to a net-supporting tension which is sufficiently great that the elevation of the first and second ends of the net's upper edge margin does not exceed the elevation of the mid-point of the net's upper edge margin by more than approximately 3/4" (2 cm) when the first and



second ends of the net's upper edge margin are at approximately the same elevation; and

moving the upper post sections of the first and second net standards  
25 between their raised and lowered positions without reducing the tension of the  
cable below the net-supporting tension.

2. A method as set forth in claim 1 further comprising providing a  
tensioning mechanism on the upper post section of the first net standard, and  
wherein the step of tensioning the net-supporting cable comprises using the  
tensioning mechanism to tension the net-supporting cable to the net-  
5 supporting tension.

3. A method as set forth in claim 1 further comprising providing a  
winch mechanism on the upper post section of the first net standard, and  
wherein the step of tensioning the net-supporting cable comprises using the  
winch mechanism to tension the net-supporting cable to the net-supporting  
5 tension.

4. A method as set forth in claim 3 wherein the winch mechanism  
moves with the upper post section of the first net standard as the upper post  
section of the first net standard is moved between its raised and lowered  
positions.

5. A method as set forth in claim 1 wherein each net standard further comprises a crank-operable drive mechanism having a crank rotatable about a crank axis, and wherein the upper post section of each net standard is moved between its raised and lowered positions by rotating the crank of the corresponding net standard about its crank axis.

6. A method as set forth in claim 1 wherein each net standard further comprises a drive mechanism operable to move the upper post section of the corresponding net standard between its raised and lowered positions, and wherein the step of moving the upper post sections of the first and second net standards is accomplished by operating the drive mechanisms.

7. A method as set forth in claim 6 wherein the drive mechanism of each net standard comprises a screw-type drive mechanism having an elongate screw extending generally along the post axis, and a threaded adjuster member threadably engageable with the elongate screw, the elongate screw being operatively connected to one of the upper and lower post sections in a manner to permit rotation of the screw about the post axis and relative to said one post section, the threaded adjuster member being operatively secured to the other of said upper and lower post sections, the upper and lower post sections and the adjuster member and the screw being arranged and configured so that rotation of the screw effectuates movement of the upper post section relative to the lower post section between its raised and lowered positions, and wherein the step of moving the upper post

sections of the first and second net standards is accomplished by rotating the screws.

8. A method as set forth in claim 1 wherein:

the step of securing the first and second net standards to the support surface comprises securing the first and second net standards to the support surface in a manner so that the first and second net standards are spaced

5 apart by at least 32 feet; and

the step of providing the net and cable assembly comprises providing the net so that the distance between the first and second ends of the edge margin is at least thirty feet.

9. A method as set forth in claim 8 wherein the step of moving the upper post sections of the first and second net standards comprises lowering the upper post sections of the first and second standards to change the height of the mid-point of the net's upper edge margin from about 7 feet, 11 5/8

5 inches to about 7 feet, 4 1/8 inches without reducing the tension of the cable below the net-supporting tension.

10. A method of adjusting the height of a volleyball net comprising:

securing first and second net standards to a support surface, such as a floor, in a manner so that the net standards extend up from the support surface in a generally upright position, each net standard comprising a lower post section, an upper post section slidably connected to the lower post

section for telescoping movement of the upper post section relative to the lower post section along a post axis between a raised position and a lowered position, and a drive mechanism operable to move the upper post section between its raised and lowered positions;

- 10            providing a net and cable assembly comprising a net and a net-supporting cable, the net having an upper edge margin and a cable-receiving sleeve at its upper edge margin, the upper edge margin having first and second ends and a mid-point midway between the first and second ends, the net-supporting cable extending through the cable-receiving sleeve of the net;
- 15            operatively connecting the net-supporting cable to the upper post sections of the first and second net standards in a manner so that the net is between the first and second net standards and extends downward from the net-supporting cable;
- providing a tensioning mechanism on the upper post section of the first
- 20   net standard;
- using the tensioning mechanism to tension the net-supporting cable between the upper post sections of the first and second net standards;
- operating the drive mechanism of the first net standard to move the upper post section of the first net standard between its raised and lowered
- 25   positions, and to move the tensioning mechanism therewith; and
- operating the drive mechanism of the second net standard to move the upper post section of the second net standard between its raised and lowered positions.

11. A method as set forth in claim 9 wherein the steps of operating the drive mechanisms are performed after the step of using the tensioning mechanism to tension the net-supporting cable.

12. A method as set forth in claim 10 wherein the step of using the tensioning mechanism to tension the net-supporting cable comprises using the tensioning mechanism to tension the net-supporting cable to a net-supporting tension which is sufficiently great that the elevation of the first and second ends of the net's upper edge margin does not exceed the elevation of the mid-point of the net's upper edge margin by more than approximately 3/4" (2 cm) when the first and second ends of the net's upper edge margin are at approximately the same elevation.

13. A height-adjustable net and standard system for use in ball games such as volleyball, the net and standard system comprising:

first and second net standards adapted for being secured to a support surface, such as a floor, in a generally upright orientation so that the first and second net standards are horizontally spaced from one another;

a net having an upper edge margin, a lower edge margin, and side margins, the net having a cable-receiving sleeve at its upper edge margin, the net being adapted to be supported by and extend between the first and second net standards;

- 10 a net-supporting cable adapted for extending through the cable-receiving sleeve of the net and for supporting the net between the net standards;
- at least one tension adjusting mechanism;
- each of the first and second net standards comprising a lower post
- 15 section, an upper post section slidably connected to the lower post section for telescoping movement of the upper post section relative to the lower post section along a post axis between a raised position and a lowered position, and a drive mechanism operatively connected to the upper and lower post sections, the drive mechanism being operable in a manner to axially move the
- 20 upper post section relative to the lower post section between its raised and lowered positions;
- the tension adjusting mechanism being attached to the upper post section of the first net standard and being adapted to tension the net-supporting cable in a taut configuration between the first and second net
- 25 standards;
- the drive mechanism being adapted to move the corresponding upper post section between its raised and lowered positions even when the cable is tensioned by the tension adjusting mechanism.

14. A system as set forth in claim 13 wherein the drive mechanism of each net standard comprises a screw-type drive mechanism.

15. A system as set forth in claim 13 wherein the drive mechanism of each net standard comprises a screw-type drive mechanism having an elongate screw extending generally along the post axis, and a threaded adjuster member threadably engageable with the elongate screw, the
- 5 elongate screw being operatively connected to one of the upper and lower post sections in a manner to permit rotation of the screw about the post axis and relative to said one post section, the threaded adjuster member being operatively secured to other of said upper and lower post sections, the upper and lower post sections and the adjuster member and the screw being
- 10 arranged and configured so that rotation of the screw effectuates movement of the upper post section relative to the lower post section between its raised and lowered positions.

16. A system as set forth in claim 15 wherein the screw-type drive mechanism of each net standard further comprises a manual mechanism for manually turning the screw about the post axis.

17. A system as set forth in claim 16 wherein the manual mechanism of each net standard comprises a crank and a gear train, the crank and gear train being configured and arranged so that rotating the crank about a crank axis causes the screw to turn about the post axis.

18. A system as set forth in claim 13 wherein the tension adjusting mechanism comprises at least one winch mechanism connected to the upper

section, the winch mechanism being adapted and configured for increasing tension of net between the first and second net standards.

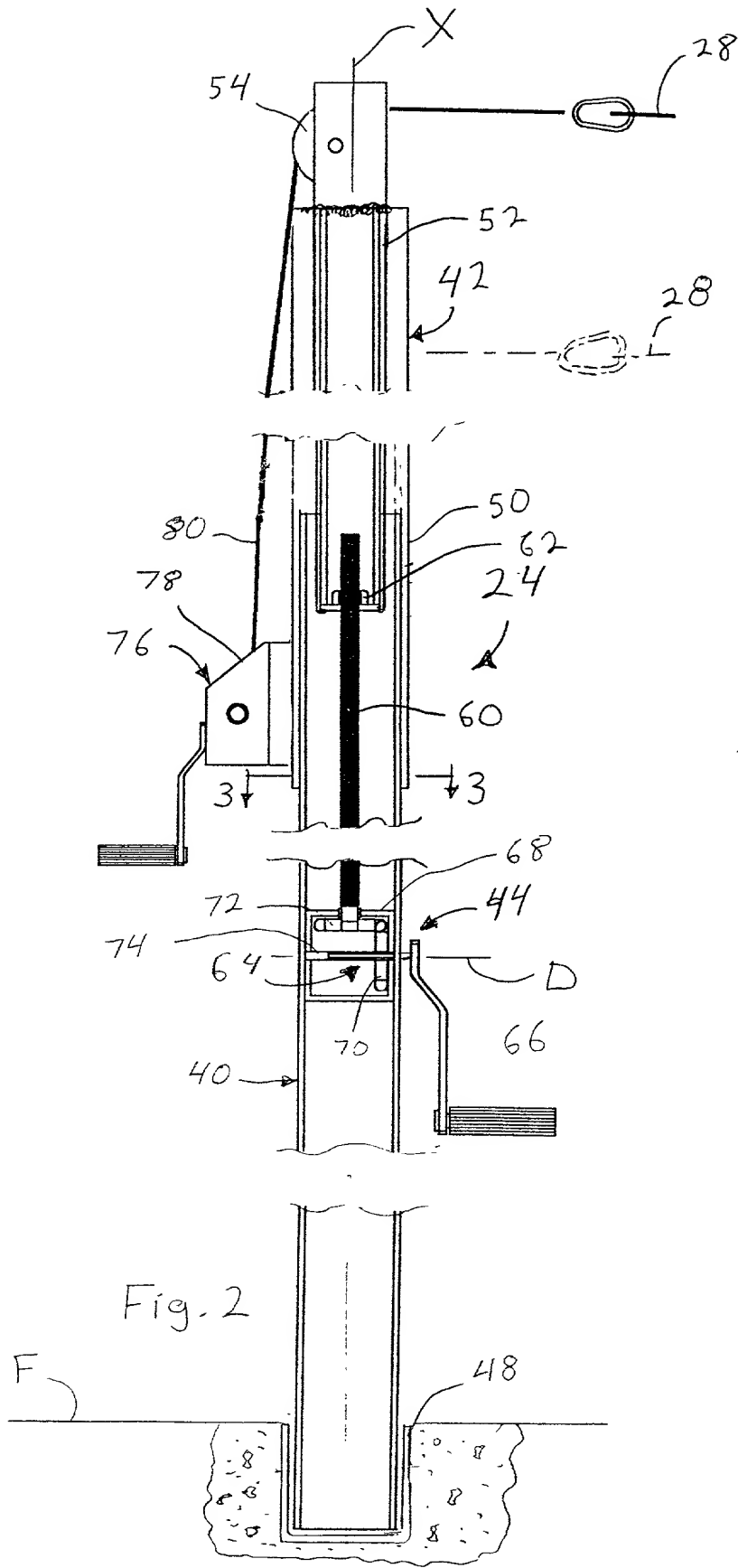
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## HEIGHT-ADJUSTABLE VOLLEYBALL NET AND STANDARD SYSTEM AND METHOD

### Abstract Of The Disclosure

A method for adjusting the height of a volleyball net comprises securing first and second net standards to a support surface. Each net standard comprises a lower post section and an upper post section slidably connected to the lower post section for telescoping movement of the upper post section relative to the lower post section. A net and cable assembly comprises a net and a net-supporting cable. The net has a cable-receiving sleeve at its upper edge margin. The net-supporting cable extends through the cable-receiving sleeve of the net. The method further comprises operatively connecting the net-supporting cable to the upper post sections, tensioning the net-supporting cable to a net-supporting tension which is sufficiently great that first and second ends of the net's upper edge margin does not exceed the elevation of the mid-point of the net's upper edge margin by more than approximately 3/4" (2 cm) when the first and second ends of the net's upper edge margin are at approximately the same elevation, and moving the upper post sections between raised and lowered positions without reducing the tension of the cable below the net-supporting tension.



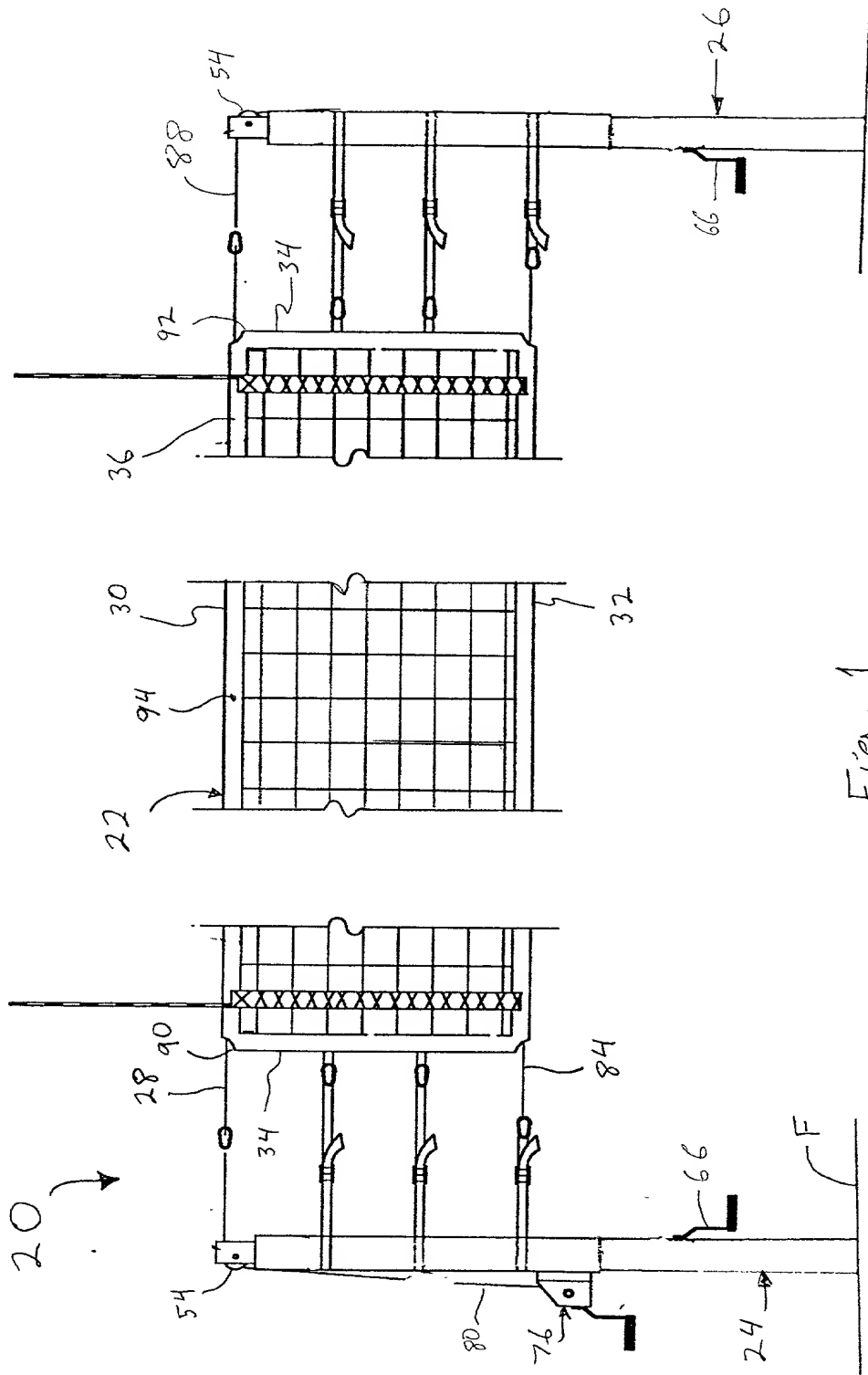


Fig. 1

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**COMBINED DECLARATION AND POWER OF ATTORNEY**

(Original, Design, National Stage of PCT or CIP Application)

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Inventors: Christopher M. Pohrer

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are stated below next to my name, I believe I am the original, first and sole inventor (if only one name is listed above) or an original, first and joint inventor along with those listed above (if plural names are listed above) of the subject matter which is claimed and for which a patent is sought on the invention entitled: *HEIGHT-ADJUSTABLE VOLLEYBALL NET AND STANDARD SYSTEM AND METHOD*

the specification of which: (Complete (a), (b) or (c) for type of application)

**REGULAR OR DESIGN APPLICATION**

- (a)   X   is attached hereto.
- (b)        was filed on    as Application Serial No.    and was amended on    (if applicable).

**PCT FILED APPLICATION ENTERING NATIONAL STAGE**

- (c)        was described and claimed in International Application No.    filed on    and as amended on    (if any).

**ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56.

       In compliance with this duty there is attached an information disclosure statement.  
37 CFR 1.97.

## PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

[Complete (d) or (e)]

- (d) ☒ no such applications have been filed.
- (e) ☐ such applications have been filed as follows.

### EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO SAID APPLICATION

Country	Application No.	Date of filing (day, month, year)	Date of issue (day, month, year)	Priority Claimed
				<input type="checkbox"/> YES <input type="checkbox"/> NO
				<input type="checkbox"/> YES <input type="checkbox"/> NO

### ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO SAID APPLICATION


### CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)

I hereby claim the benefit under Title 35, United States code, § 119(e) of any United States provisional application(s) listed below:

(Provisional Application Number)	(Filing Date)
(Provisional Application Number)	(Filing Date)
(Provisional Application Number)	(Filing Date)

## CONTINUATION-IN-PART

(Complete this part only if this is a continuation-in-part application)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.)	(Filing Date)	(Status)	(Patent, pending, abandoned)
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(Application Serial No.)	(Filing Date)	(Status)	(Patent, pending, abandoned)
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## POWER OF ATTORNEY

As a named inventor, I hereby appoint the following attorney and/or agent to prosecute this application and transact all business in the U.S. Patent and Trademark Office connected therewith, before all competent international authorities in connection with any international application, and before all foreign patent offices in connection with the national phase of any international application or any foreign application, and to appoint any associate attorneys in connection with any application, either domestic, international or foreign national.


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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Christopher M. Pohrer

Inventor's signature 

Date 10-12-00 Country of Citizenship United States

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